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ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA,
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Published:

- with international search report
- before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments

(88) Date of publication of the international search report:
14 April 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: COMPUTER SYSTEMS AND METHODS FOR ASSOCIATING GENES WITH TRAITS USING CROSS SPECIES DATA

(57) Abstract: A method for confirming the association of a query QTL or a query gene in the genome of a second species with a clinical trait T exhibited by the second species. A first QTL or a first gene in a first species that is linked to a trait T' is found. The trait T' is indicative of trait T. A region of the genome of the first species that comprises the first QTL or the first gene is mapped to a particular region of the genome of the second species. A query QTL or a query gene in the second species that is potentially associated with the trait T is found. The potential association of the query QTL or the query gene with the clinical trait T is confirmed when the query QTL or the query gene is in the particular region of the genome of the second species.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/41613

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : G06F 19/00

US CL : 702/19

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 702/19

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	SCHADT ET AL. Genetics of gene expression surveyed in maize, mouse and man. Nature. March 2003, Vol. 422, pages 297-302, especially page 297	1-86, 126-200

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&"

document member of the same patent family

Date of the actual completion of the international search

19 January 2005 (19.01.2005)

Date of mailing of the international search report

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Name and mailing address of the ISA/US

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Commissioner of Patents

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/41613

Box I Observations where certain claims were found unsearchable (Continuation of Item 1 of first sheet)

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claim Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claim Nos.: 87-125
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
Please See Continuation Sheet
3. ☐ Claim Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

☐
☐

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

PCT/US03/41613

Continuation of Box I Reason 2:

Claims 87-125 are drawn to specific sequence SEQ ID NOS. and require a sequence listing and computer readable form which were not filed by the applicants. The applicant did not respond to the Form PCT/ISA/225 Invitation to furnish nucleotide and/or amino acid sequence listing complying with standard that was mailed on 22 March 2004.

Continuation of B. FIELDS SEARCHED Item 3:

Medline, Biosis, US Patent publication and issued, Derwent WPI
search terms: expression quantitative trait loci